



JULY 1953

# Soil Conservation

OFFICIAL ORGAN OF THE SOIL CONSERVATION SERVICE

# SOIL CONSERVATION

JULY 1953

VOL. XVIII—NO. 12

EZRA TAFT BENSON  
SECRETARY OF AGRICULTURE

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ISSUED BY SOIL CONSERVATION SERVICE  
U. S. DEPARTMENT OF AGRICULTURE, WASHINGTON, D. C.

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SOIL CONSERVATION is published by direction of the Secretary of Agriculture as administrative information required for proper transaction of the public business, under approval (August 6, 1951) of the Director of the Budget. SOIL CONSERVATION supplies information for workers of the Department of Agriculture and others engaged in soil conservation.

15 CENTS PER COPY

\$1.25 PER YEAR

FOREIGN—\$1.75 PER YEAR

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**BILINGUAL CONSERVATION.**—Because there are a lot of French speaking farmers there, the Essex County (Vt.) Soil Conservation District finds it desirable to issue its news letters and other information in two texts, English and French. After the copy has been prepared by one of the SCS technicians, perhaps Dick Gowdy, it is translated into French by Bernard Routhier, a conservation aid. Time and effort put into this extra service are well spent, district directors agree, after gauging the response.

**DRINKING WATER IMPROVES.**—Drainage in the Satilla River Soil Conservation District around Waycross, Ga., has been bringing farmers a lot of agricultural benefits. J. T. Peacock, who lives in the flatwoods near Dubus Bay, claims it has improved the drinking water, too.

Dubus Bay is a swampy depression with no natural outlet, covering about 200 acres. Farmers and landowners in the immediate area couldn't drain their lands because there were no natural outlets for ditches.

The Satilla River District supervisors requested SCS engineers to make a survey, and the latter designed a 4-mile canal from Dubus Bay into Okefenokee Swamp. Ware County and the City of Waycross assisted landowners in digging it.

"Water from our wells never did taste fit to drink until the canal was dug," Peacock says.



**FRONT COVER.**—This photograph by Gordon S. Smith shows the 182-acre dairy farm of Walter Hawley, who has been a co-operator in his soil conservation district since 1948. The Hawley farm is in Newlin Township, Chester County, Pa. That is the east branch of the Brandywine showing at the bottom.

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# Its Wonders Multiply, Year by Year

*Face-lifting in New Jersey has constantly expanding benefits.*

By KENNETH B. MALLERY



Somerville High School students in "field laboratory" at VanZandt farm learn use of instruments in establishing farming practices.

(Photos by Harry R. Slayback, Rutgers)

**A** FACE-LIFTING—whether small, medium or large—must be something more than a one-day affair. It's "what comes after" that really counts.

Mid-Jersey Soil Conservation District offers the event that attracted 8,000 people to VanZandt Brothers' Broad View Farm at Blawenburg, N. J., in 1950, as an outstanding example of what can be done to build constantly expanding benefits.

With cooperation by owners, farm manager, the district and others, the 270-acre farm has been developed into a highly important demonstration, laboratory and training center for high school and college students, teachers, farmers, and county agents. Each succeeding year brings wider use by all these groups. For 3 years some of them have been observing year-to-year changes brought to the farm as the result of practices established during and since the biggest agricultural field day that the Garden State has ever had.

Boys and girls in science and agricultural classes at Somerville and other high schools make regular visits for outdoor study. Teachers taking summer work at the State Teachers' College at Trenton

make their most important stop there when they go on tours related to class work. Farmers go annually, several groups each year, to observe the changes that have been made and still are taking place. Soils men stop to study soil and its best use, and land capabilities. Instructors bring vo-ag boys, and county agents who are in training, to get first-hand knowledge of what conservation farming looks like, and what benefits can be expected from it.

It is the focal point around which Grace E. Dick, science teacher at Somerville, has introduced a new method of teaching to New Jersey high schools. When she discovered that classroom study has sharp limitations, she remembered that she had received her training outdoors, when she attended a summer conservation school in northern New Jersey. With others, she arranged a trip to this farm for 30 of her pupils.

This was the beginning of what is now widely known as "field laboratory" sessions at Somerville High. They have a strong appeal to boys and girls, and more than 200 have been trained in this way. Miss Dick has grown in her teaching job and now conducts the field sessions without help from technicians.

Note.—The author is work unit conservationist, Soil Conservation Service, Somerville, New Jersey.



Conservation workshop students from Trenton State Teachers' College listen to roadside lecture by Granville Quackenbush, SCS soils specialist.



Jersey farmers study soils at VanZandt farm under direction of Wallace A. Mitcheltree, extension soil scientist.

The "laboratory" sessions begin with a tour of a small watershed, on which road-cut soil profiles, types of erosion, siltation and other problems are observed and discussed. At other stops they delve into the importance of grass and other vegetative cover, and its management. Then they go to Broad View Farm, or some other conservation farming enterprise, where they walk over the fields and learn about contour strip-cropping, terraces and rotations. Here they get training in the use of simple equipment. The old army line system of running contour and level lines with hand and tripod levels is followed. Each boy or girl teaches the next student as the equipment is passed along the line. The group learns by doing.

From a conservative start 4 years ago, when permission was hard to get from the school board, the "field laboratory" sessions at Somerville High have climbed to the top rung of popularity in teaching. Mid-Jersey district supervisors put high value on the boys and girls who have been training in their district.

The VanZandts and their manager, Marvin Hunt, also have many reasons to be happy. They have seen the run-down farm make a tremendous comeback and take a strong upward swing in production. Grain yields have jumped 40 percent. Total grass and hay yields have doubled on fewer acres. Corn

silage has gains of 40 percent in quantity and quality.

Manager Hunt declares: "Of course, improved seed varieties, more efficient equipment and better management practices do account for some of the increased production and other operating benefits—perhaps a fourth of it—but the bulk of the gain, surely three-fourths, is the direct result of conservation practices and improved land use.

"These good farming tools enable us to get the full benefit of the better seed, fertilizer and lime. But, mind you, we are using no more lime and fertilizer than we did under our old program. Without contour strips and terraces, the lime, fertilizer, better seed and equipment would not have helped so much."

With 50 acres of grassland producing more than the 100-head dairy herd can eat, where 75 acres did not produce enough for a smaller herd in other years, the farmers are looking ahead in the belief that the place can carry a herd of 125 head, including 75 milkers.

Broad View is a nice spot for boys and girls, teachers, farmers, county agents and others to see for themselves the values of farming the conservation way, and how cooperation with a soil conservation district really pays off.

## Still Another Instance

*A one-day demonstration starts a farm as a public example of conservation practices.*

By J. WILLIAM BELLIS

RESULTS pile up from a small county field day—a relatively small event—held at the dairy farm at St. Bernard's Preparatory School near Peapack-Gladstone, at the Morris-Somerset county line in New Jersey, 3 years ago.

In establishing about half of a complete conservation plan in one day, five bulldozers removed 4,050 feet of hedgerows to facilitate strip-cropping. Six tractors were used in ploughing out 45 acres of contour strips and to help establish 250 feet of soil waterways.

A ditch 2,477 feet long, 4 feet wide at the bottom and 12 feet wide at the top, had been planned to benefit 600 acres. At the field day 900 feet were built and the rest has been completed since. As a starter in reforestation, 1,000 black locust seedlings were planted.

In one day, all this was accomplished with a minimum of technical assistance.

The farm is astride the dividing line between two major geological formations, a fact which enhances its teaching value. An excellent basis for land-judging contests is provided at pits dug to expose profiles in four different land capability classes. A

Note.—The author is SCS work unit conservationist at Morristown, New Jersey.



Conservation "picture window" at St. Bernard's School Farm.

high spot serves as an observation post for discussing soil and water conservation practices.

On-the-spot evidence of heavy topsoil losses through erosion makes it possible to conduct yield studies convincingly. Sample corn yields on eroded and non-eroded soil in the same field have been weighed, and differences running as high as 26 percent in favor of non-eroded soil have been found.

Students in St. Bernard's science course get out on the land for instruction in measures to protect and revitalize the soil. Boys and girls from other schools, and groups from garden clubs, come fre-

quently in conducted tours. Members of the local county committee and of USDA's Production and Marketing Administration get special conservation instruction here. The north Jersey area fertilizer dealers' training class had a special session at the farm this year. Technicians of the Morris County Soil Conservation District bring groups of farmers who want to become cooperators to observe recommended practices.

Expansion of the productive capacity of the farm started with the field day 3 years ago, but the greater benefit came later and is still coming.

## He Brought the Meadows Back

*It took seven small dams and six long years, but Paul Thurston's ranch now has water, grass, and a future.*

By EARL B. SPENDLOVE

SIX YEARS AGO Paul Thurston of Hurricane, Utah, bought a ranch on the headwaters of Little Meadow Creek a few miles east of Zion National Park. He wondered how the creek had come by its name. There certainly weren't any meadows in sight. The stream had cut a gully 40 to 50 feet deep in places, and what evidently had

been meadow in the days of the early settlers now was barren and dusty.

Thurston learned that the history of the ranch was similar to that of others in the inter-mountain area. The terrain is steep and rough. Natural water is scarce, and usually found in the bottoms of narrow, steep-sided canyons.

When livestock grazing began in this area, most of the canyon bottoms were highly productive

Note.—The author is soil conservationist, Roosevelt, Utah.

meadows. Livestock concentrated there because of the highly palatable feed, and because the meadows were easily reached and contained the only natural water.

Livestock soon killed out the grasses that held the soil and prevented erosion. It wasn't long before the gullies in the bottoms had lowered the water table and moisture-loving grasses couldn't grow. The formerly high producing meadows were replaced by brush and unpalatable weeds, or were left practically devoid of vegetation.

This was the situation when Thurston first saw Little Meadow Creek. He was worried by the gully, and by the fact that the deep, rich soil in the bottoms was producing nothing of value.

His concern led him to seek assistance from the Kane County Soil Conservation District. He and a technician went over the ranch with care.

The first decision was to reduce the number of livestock so that vegetation could improve sufficiently to retard the flow of water during flash floods. Next in order was to construct a dam at the head of the drainage where a natural spillway was avail-



Thurston, and mount, where the grasses now grow tall.



Portion of original gully now below large dam. It once ripped along the full length of the meadows.

able. The idea was to slow down the rush of water during torrential downpours.

Thurston then was ready to go to work on one of the more promising areas along the creek. Here the gully was not so deep, and water could be diverted over adjacent flat land. Seven small dams were put up at 200-foot intervals along a quarter mile of the stream.

The first dam was located so that the stream, normally flowing about .5 c.f.s. would be spread on either side of the gully. Spreader ditches were given about a .2-foot fall per 100 feet. Water was turned out over the adjacent land through openings in the ditch. Since part of the water would eventually return to the gully, the other dams were located to catch this water and again turn it out of the main gully.

The water had to drop about 25 feet at the lower end of the spreading area, so the head cut constantly progressed up the stream. In order to eliminate



Lush growth of grass where some of the series of small dams can be seen.

this, the water was diverted into a small side drainage that had been filled with brush and rocks to prevent washing.

After the dams were built, about six and a half acres of the more level land were cleared of brush, which was pushed into the gully between the dams. This helped considerably in filling the gully and provided about 20 acres suitable for seeding to grass.

However, before seeding, the area was fenced to control grazing. This, according to Thurston, is a "must" in any seeding program. Since Thurston and the district supervisors were interested in determining which species would grow on this land, several grasses and legumes were seeded.

Species used were crested, western, tall, intermediate and stiffhair wheatgrasses, smooth brome and yellow sweetclover on the drier areas. Reed canary, smooth brome, orchardgrass, redtop and red clover were seeded along the stream and where moisture was good. The grasses were seeded both in mixtures and in pure stands so their adaptability and relative palatability could be determined.

The grasses all did well from the start. By the summer of 1952, the gully had filled to the extent that about 10 acres along the sides of the creek had become sub-irrigated and some of the moisture-tolerant grasses were beginning to invade the areas

that had been seeded to wheatgrasses. Raising of the water table, however, was part of the plan, and moisture-loving grasses are being encouraged on the wetter areas.

This portion of Little Meadow Creek now looks as it must have during the days of the early settlers. The gully is almost filled, and there is a lush growth of grass along both sides of the stream. People who see the area now find it hard to believe that this was an ugly scar in the canyon bottom just 6 years ago.

"Can the average rancher afford to do this type of work?" rancher friends have asked Thurston.

"The average rancher can't afford not to do such work," Thurston replies, and he has figures to prove his statement.

His itemized account of what he has spent on the 20.4 acres totals \$794.12. This includes the cost of land clearing, building dams, fencing, seed, overhead, and of work done with his farm tractor. A cost of \$36.72 an acre.

About half of this land now is sub-irrigated and compares favorably with native meadow which sells for about \$100 an acre. The dry land that is seeded to grass is worth at least \$25 an acre. Thurston says

(Continued on page 279)

# Coming Through the Drought

By LEON J. McDONALD

*785*  
LIVESTOCK men of Oklahoma last year proved that conservation ranching is good business. A 5-months drought, an unusually early frost, depleted feed reserves, larger numbers of cattle on the range, and declining prices plagued stockmen last fall. But those who had been practicing soil conservation for a number of years came through with colors flying.

Take A. P. Atkins, as an example. Atkins has practiced conservation in operating his 9,000-acre spread south of Hardesty in the Oklahoma Panhandle ever since 1941, when he signed with his Texas County Soil Conservation District. Now he is secretary of his district board.

All the rain he got in 1951 was only 10.60 inches, but Atkins says: "I have been able to keep my

whole cow herd, yearling heifers, and the entire 1952 calf crop without acquiring any additional range or purchasing any feed except the customary amount of protein supplement."

Atkins follows a flexible program. He stocks conservatively with grade Hereford cows, and carries the calves over to yearlings except in periods of extreme drought.

"The best protection against drought on my tightland range," he explains, "is a natural cover of grass which lets the soil absorb moisture whenever it falls, protects new growth, stimulates natural reseeding, and provides a reserve of feed during a long dry spell."

Atkins stocks his range with cows at about 75 percent of the estimated carrying capacity and rests each pasture one year out of five. He has fenced his pastures in such a way that they have about the same carrying capacity. He has "live" water in some of the pastures. He has added nine

Note.—The author is assistant state conservationist, Soil Conservation Service, Oklahoma City, Okla.



Percy Martin, of McCurtain County, Okla., and two of his young Hereford bulls.



Good cattle graze on the Atkins ranch near Hardesty, Okla.

stock ponds and four wells to provide plenty of water at convenient locations. He maintains 15 miles of fire guards.

Atkins gives his conservation program credit for increasing his calf crop 10 percent and adding 50 pounds to the weight of his calves. He has increased the carrying capacity of his ranch at least one-third with a potential gain of 25 pounds of beef per acre from cows and calves. He conservatively figured the value of his conservation ranching for 1952 alone at \$50 a head on the 700 cattle he was wintering.

When the brother team of Claude and Bill Brannan started with the Love County Soil Conservation District in 1943, the native range on their 4,500-acre ranch near Marietta was generally in only fair condition. Now most of their native grassland is in good and excellent condition.

In carrying out their conservation program, the Brannans balanced the number of cattle with the grazing available, deferred the grazing where needed, and divided several pastures to make livestock and grazing management easier. They grew sweetclover, fescue, vetch and small grains on 400 acres of cropland for supplemental pasture and put up about 400 tons of ensilage annually. Sixteen ponds and five wells were added to provide an adequate water supply and distribute grazing uniformly.

Claude Brannan, a soil conservation district supervisor since 1948, says that the carrying capacity of their grassland has increased at least 20 percent. Their calves formerly weighed 400 pounds at weaning age; now they weigh 500 pounds. These two benefits add up to about a 50 percent increase in pounds of beef an acre.

For many years the Buxton Horse Shoe Ranch near Roff has been a mecca for Oklahoma's cattle-

men. On this 9,000-acre ranch of native range, two blades of grass have been made to grow where one grew before.

C. C. Buxton says, "Where we were producing 5,000 bales of hay each year, we now produce about 20,000, and where we grazed off about all our grass we now leave as much as we take."

Because of the drought no native hay was cut in 1952. The ranch carries a 2-year's supply, however, so there is never a hay shortage there. As a substitute for supplemental feed last summer, the ranch turned 300 cows into a 1,500-acre pasture where it normally cuts hay. This relieved pressure on the grass on the rest of the ranch.

Other good management practices here included a 17 percent reduction in cattle numbers in 1948 (which did not result in any net decrease in pounds of beef produced): deferred grazing on 3,000 acres in 1950 during the growing season; division of three pastures into six pastures to obtain more even distribution of grazing and to permit deferment for range improvement; building of 12 additional ponds; development of 12 new wells; placing salt to encourage grazing in areas of lightly-used grass; properly stocking all pastures; and production of alfalfa hay on 260 acres properly fertilized.

Buxton estimates that these coordinated conservation practices have given him an overall 15 percent increase in carrying capacity, while his range is still improving. Horse Shoe Ranch is with the Pontotoc County Soil Conservation District. It is through their districts that farmers and ranchers obtain technical help from the Soil Conservation Service in planning and applying a conservation program that fits their land.

The Percy Martin Ranch, south of Valliant, has pioneered in grassland developments in southeast Oklahoma. Of the 1,683 acres in the ranch, 480

acres are in native grass and 690 acres in tame pastures mostly a combination of bermudagrass-whiteclover and tall fescue-ladino clover. Large quantities of commercial fertilizers were used to establish the tame pastures, and still are applied regularly as top dressing. The perennial bermudagrass and tall fescue overseeded with clovers give almost year-round grazing.

Management practices include proper stocking, deferment of grazing when indicated, cross-fencing, development of springs and ponds to better distribute grazing, and construction of fire guards to protect valuable grasslands.

Martin says that his calf crop has increased from 70 to 95 percent and the carrying capacity of his ranch has been upped from 15 to 20 acres per cow to 4 acres per cow. Beef production per acre has increased from 20 to 125 pounds.

Because of his perennial grasses that are ready to grow when the rains come, and good management practices through the years, Martin survived the 1952 drought in good shape. He is getting the help of the Valliant Soil Conservation District in applying a conservation program.

Warner-Borum-Warner is a name well known among cattlemen. The 7,000-acre ranch in Muskogee County is managed by R. C. Borum, a pioneer Hereford breeder and agricultural leader. About 3,500 acres consist of native range with the bluestems, Indian-grass and switchgrass predominant. Another 1,750 acres of former cropland have been set to bermudagrass overseeded with legumes. Hay is obtained from 700 acres of native meadow and a 150-acre meadow of sericea lespedeza. Alfalfa is grown on river bottom land not a part of the ranch.

Supplemental feed sources consist of 400 tons of ensilage, 100 acres of tall fescue, and occasional grazing of winter grains and vetch grown on some of the 1,000 acres of cropland.

Two tons of lime and 1,000 pounds of rock phosphate have been applied to each of the 1,750 acres of tame pastures.

Borum, chairman of the board of supervisors of the Muskogee County Soil Conservation District, believes in small pastures properly stocked, and plenty of watering places conveniently located to distribute grazing evenly.



E. S. Cordell, technician, and Percy Martin take a close look at a KR bluestem pasture.

# Fish Culture in Rice Paddies

*In Haiti two crops can be grown on the same field.*

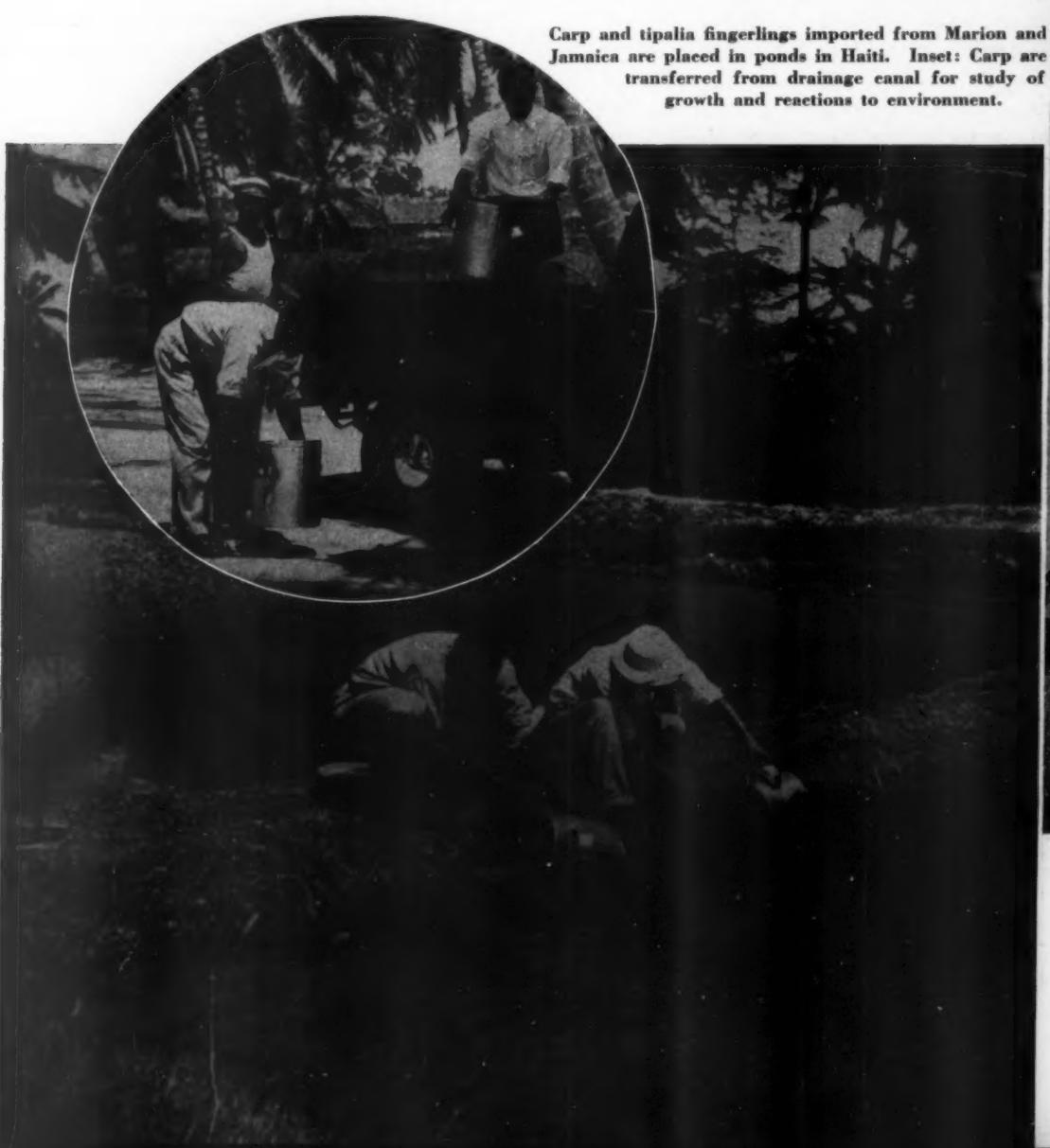
**T**WO-THIRDS of the people of the world don't get enough of the right kinds of food to eat. A lack of protein is one of the main diet deficiencies in hunger areas, yet fish, an excellent source of protein, is often available for the taking.

Although the sea is the main source of fish, fresh-

water areas are also rich sources. An acre of fresh water will produce much more animal protein than the same area in pasture.

Fish have been cultivated in ponds in Asia and Europe for hundreds of years, but this practice has been studied scientifically only recently. FAO, the

**Carp and tipilia fingerlings imported from Marion and Jamaica are placed in ponds in Haiti. Inset: Carp are transferred from drainage canal for study of growth and reactions to environment.**



ching fi

All photo



**Excavating for a pond on a farm in Haiti. It was filled by water diverted from a small stream.**



**Catching fish is a new and exciting experience for the farmers of Haiti.**

Food and Agriculture Organization of the United Nations, is helping to spread this knowledge of pond fish culture.

In Haiti, for instance, the Government asked FAO to advise on the development of its resources. Among the FAO recommendations was the use of fish culture in Haitian rice paddies and other ponds. The Haitian Government set up funds to initiate this project and FAO sent a specialist in pond fish culture methods, Dr. S. Y. Lin, to work with local officials.

Experimental breeding ponds were set up and a fish called the Sepat Siam was brought from Thailand to populate them. This type of fish does not have to be under water in order to breathe—it can live in mud if its gills are moist.

The fish swim around while the paddy is inundated, and when rice harvesting time comes the farmer digs a hole in the lowest corner of the paddy

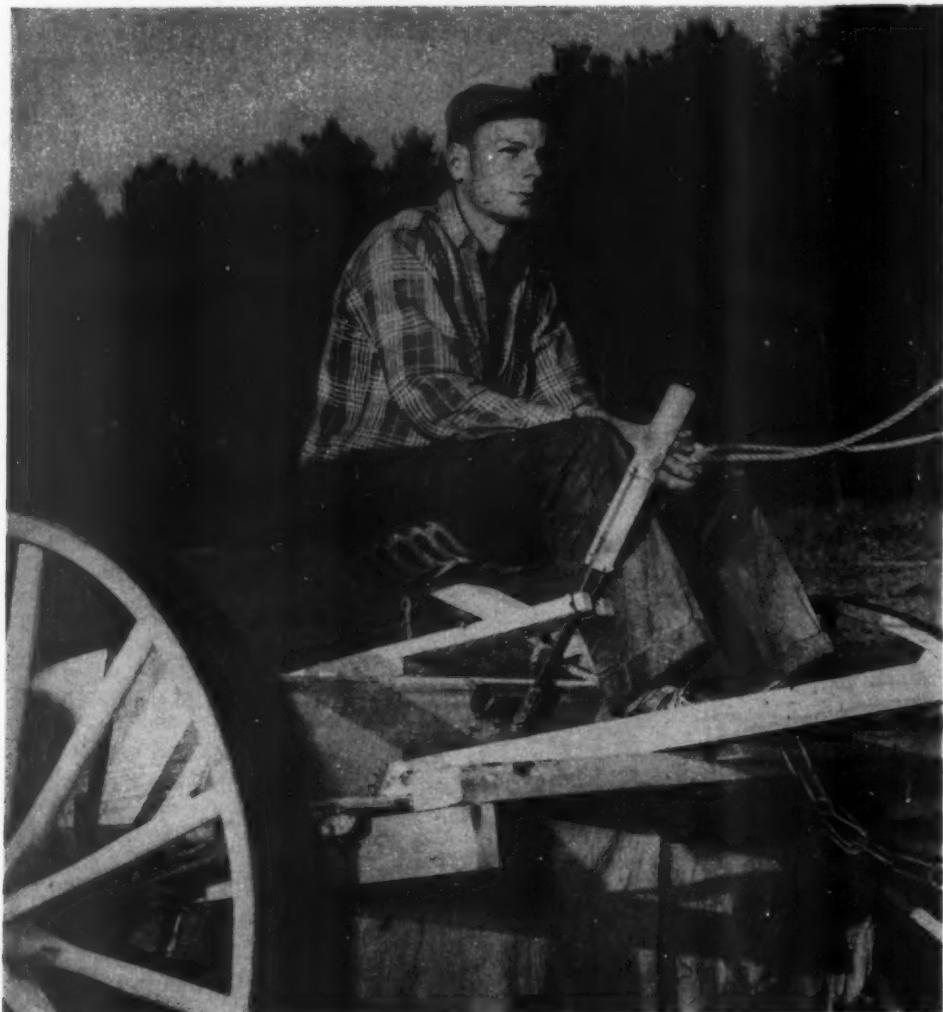
(Continued on page 282)

**Drainage canal used for experiments with fish culture.**



## DISTRICT PROFILE

HUGH TUTTLE OF NEW HAMPSHIRE



Hugh Tuttle

ONE of the youngest stars on the Nation's soil conservation team is Hugh Tuttle, who has been chairman and treasurer of New Hampshire's Strafford County Soil Conservation District ever since he helped organize it 7 years ago. Barely in his thirties, he has already run up a string of accomplishments as supervisor that would do credit to any normal lifetime of devotion to the soil. A member of the State Soil Conservation Committee, he is also president of the New Hampshire State Association of Soil Conservation District Supervisors.

Perhaps the 325 years of New England farming background wrapped up in Hugh's rangy frame provide the unusual fiber of his brand of leadership. The Tuttle family, without exception, has farmed its Dover headland from the time the British Crown made its original grant in 1636. Ninth and tenth generation Tuttles operate a thriving, fresh vegetable enterprise. In partnership with his dad, William Penn Tuttle, Hugh crops 50 of the total 180 acres, including about 16 acres of leased property. With two trucks going full tilt in season, father and

son furnish tough competition in the Dover-Somersworth-Rochester-Portsmouth market.

Hugh comes from a long line of farmers who prided themselves on their straight furrows, and it was pretty revolutionary for him to take up cultivation on the contour. Asked why he went overboard for conservation, Hugh generally replies: "Simply because we saw that soil- and water-saving was good business. That's what sells us Yankees." But there's plenty of evidence of Hugh's broader interest in the program, such as his trips to the NASCD conventions—to Oklahoma City in 1951 and to Cleveland in 1952. He's worked tirelessly with district farmers toward widening the spread of conservation benefits.

Hugh Tuttle mixes his practicing and preaching. His confidence in diversion terraces, for example, is founded in his own. He's seen it check erosion in his best field. He believes in irrigation, because he adopted it during last year's severe drouth, and figures that it salvaged enough crops to pay for the piping. He advocates farm ponds based on the usefulness of two he has himself installed. He makes a good case for woodland conservation from personal experience, such as the saving of \$700 in saw-timber that he realized while building a tool shed from selective cuttings.

Hugh spent 3 years at Harvard University but his route back to the land led through additional study at the agricultural college of the University of New Hampshire. Hugh says the intervening years have proved that he'd never be completely happy without having both feet planted firmly on the good earth around the old homestead. And the best part of it, Hugh vows, is his identification with the district movement.

Already, there are indications that the distinguished looking young man may become a sort of "Richard Halliburton" in the soil conservation adventure. At any rate, he's hard-pressed to keep up with the demand for his services as a speaker for farm and service groups throughout the Northeast. They say you can hear a pin drop when Hugh's on his favorite subject—strengthening America's prime resources.

—BERNHARD A. ROTH

**READ WHILE YOU WAIT.**—The West Ottawa (Mich.) Soil Conservation District, in addition to distributing its annual report to cooperators, places copies in the waiting rooms of all doctors and lawyers in the district.

## BROUGHT MEADOWS BACK

(Continued from page 272)

that the land on which he spent approximately \$750 now is worth at least \$1,250, a pretty good return on his investment.

In addition to the dams and water spreaders, Thurston has built a 50-foot-high dam below the water spreading area to create a lake. This lake was stocked with fish in 1949, and they have fared well. Since water from the dam can be used only on a half-acre garden, it may not pay for itself in dollars and cents. However, if you happen to be a fisherman and hook one of those fighting rainbow trout, you'll know that Thurston is getting full value from his lake.

**SPRIG PLANTER.**—A retired manufacturer of Tulsa is back in business now because of his interest in soil conservation.

Harley L. Pray sold his winch manufacturing company in 1946 because of poor health. Two years of fishing and loafing in California gave him new zip and an urge to get back in harness.



Grass planter during performance test.

During his interlude of leisure he often mulled over the conservation work he had done on his ranch in Oklahoma. He recalled, for instance, the planting of bermudagrass—and what a back-breaking job that had been! There surely must be an easier and quicker way to get it going.

Back home again in Tulsa he got in touch with the supervisors of the Arkansas-Verdigris Soil Conservation District, and Warren McCarty, work unit conservationist. Wasn't there something he could do to manufacture a machine needed especially in soil conservation work? Sure thing! he was told.

A bermudagrass sprig-planter had just been developed at the Fort Worth regional office of the Soil Conservation Service. It would be a public service to have it made generally available, and any interested manufacturer was welcome to a working model of the machine.

In the fall of 1948 Pray got his first look at a working model, and in the spring of 1949 he delivered the first planter in the district. Hundreds have followed since.

Pray's customers are soil conservation districts, individual farmers and ranchers, and private contractors who do agricultural work. He sold three of the machines to a British agency that is revegetating areas in South Africa.

The tractor-pulled machine opens furrows, drops the Bermuda sprigs at proper intervals, spreads fertilizer, and closes and firms the furrows.

Pray tests the machines—one-row and two-row planters—on his own 160-acre farm.

# Your Business, and Mine

*A metropolitan newspaper sponsors Missouri awards for outstanding soil and water conservation.*



By HOWARD C. JACKSON

**S**OIL CONSERVATION is everybody's business, a truism which the St. Louis Globe-Democrat emphasized in a recent editorial. It is the concern of merchant and banker in village and town, and of industrialist and consumer in the city.

It is also the business of the Globe-Democrat. This newspaper last year joined with the Soil Conservation Service, the State Soil Districts Commission, and the Missouri State Association of Soil District Supervisors, to conserve the state's most valuable natural resource—its topsoil.

The results of the first year of this cooperative effort are now in, and it is possible to evaluate the program. Some of the benefits are readily discernible. In 1952 there were more sound conservation practices applied to Missouri land than ever before. There were more farmers participating in the program. And there were more soil districts organized.

Other items, while less tangible, are equally significant. The program stressed community effort, and

stimulated competition among soil districts. It awakened interest in conservation on the part of business and industry in the state, as news stories and special articles dealt with the relationship of conservation to community life.

In the three previous years Missouri engaged in an awards program sponsored by the Goodyear Tire and Rubber Company. At the end of 1951, this program moved along to other states, and more recently has expanded its program to include the entire nation.

Taking over as sponsor in Missouri was the Globe-Democrat. This metropolitan newspaper had long been interested in conservation. Through its editorials, written by Charles C. Clayton, it had been most effective in helping to whet interest in Missouri.

Clayton explains that his enthusiasm for soil and water conservation was aroused when he visited the St. Charles County Soil Conservation District a number of years ago.

Note.—The author is acting state conservationist, Soil Conservation Service, Columbia, Mo.

Record crowd watches presentation of awards in Frances Howell High School, Weldon Spring.

Dr. Robert M. Salter hands plaque to winning board of supervisors of St. Charles County Soil Conservation District: A. J. Boschert, J. B. Carmichael, Leeman Sehrt (chairman), B. H. Feldewert and Ora Schnarr.



Plaques go to members of board of supervisors of Dunklin County Soil Conservation District, winner in southeast Missouri area. Charles C. Clayton, editorial writer and chairman of program's advisory committee, made presentation. Left to right: Gaylord Wisner, SCS technician working in district; Dave Andrews, board vice chairman; Clayton; Nelson B. Tinnin, board chairman; Joe H. Scott, Jr., secretary; and Vance Watson, treasurer. James Dunscomb, remaining board member, was not present.

"Seeing at first hand what can be done and hearing the comments of progressive farmers who practiced conservation," he said, "I began to see what it would mean to Missouri and to St. Louis if all the farm land in this state were planned according to good land use and proper conservation practices were employed. The potential income to the farmer was impressive, and even more significant was the benefit to the businessman and the city."

The Missouri Soil Districts Commission agreed to participate in the handling of a statewide program through its executive secretary and its state office—a program which the *Globe-Democrat* was asked to sponsor. Publisher E. Lansing Ray was happy to accept the responsibility and in May 1952 the paper announced the launching of the Missouri Soil Conservation Districts Awards Program:

"The *Globe-Democrat* is joining in the fight for more conservation in this state because we recognize not only the importance of soil conservation to agriculture, but also its direct relationship to flood control and its importance to business. Products from the land provide the raw materials for more than half of St. Louis' industry.

"Missouri farmers provide a profitable market for our manufactured goods. This two-way relationship is the basis of a stable economy in Missouri. The *Globe-Democrat* sincerely hopes that its sponsorship of the soil conservation districts awards program will encourage more sound soil conservation in this state and will help awaken business and industry to the realization of their stake in preserving and improving Missouri's most valuable natural resource."

The first step was to form an advisory committee

to draw up a plan and administer it. Clayton was chairman. Other members were Lowell Burns, agricultural director, St. Louis Chamber of Commerce; J. H. Longwell, Dean of the College of Agriculture of the University of Missouri; Joe Grant, Williamsburg, Mo., representing the Missouri Association of Soil Districts; Bernard Pfost, Cowgill, Mo., Caldwell County Soil District; Nelson Tinnin, Hornersville, Mo., representing the State Soil Districts Commission; Rt. Rev. Msgr. George J. Hildner, Villa Ridge, Mo.; Howard C. Jackson, Columbia, Mo., representing the Soil Conservation Service; and Robert S. McClelland, Columbia, executive secretary of the State Soil Districts Commission, who was to serve as secretary.

The committee agreed to stress community rather than individual effort. The members also felt that the awards should be attractive enough to encourage spirited competition on a group basis. Sweepstakes prize was made an all-expense trip to the annual convention of the National Association of Soil Conservation Districts for from eight to ten persons from the outstanding district of the state.

The Missouri Association of Soil Districts is divided into five areas, with a director elected from



Shelby County Soil Conservation District won in the northeast area. Recipients of plaques were: John K. Bradley, Howard Thompson, Guilford Erdman, John Douglas, and SCS's Donald Snook.

each. This division suggested the other awards. It was decided to recognize the winning district in each area with a "recognition party," in which everyone could participate. Bronze plaques would go to the supervisors of the winning districts.

A comprehensive score sheet was devised, and entries invited. Amazingly, there was 100 percent participation. Every soil district in Missouri entered

the '52 contest and every governing board laid its strategy for winning the grand prize.

Throughout the year there were special articles and feature stories in the *Globe-Democrat* telling of progress.

In January of this year the results were announced on the front page of the *Globe-Democrat*. Many other state papers, and numerous radio stations, wholeheartedly joined in telling the story of the year.

Area winners were Worth, Clay, Shelby, St. Charles, and Dunkin County Soil Districts.

The coveted grand prize went to Worth County—the smallest district in the state. This district was headed by an enterprising and hard-driving taskmaster, Chairman L. C. Lutes, and it turned in an impressive record.

In February 10 persons from Worth County, including the supervisors and their wives, boarded the train for Omaha, Neb., site of the NASCD convention. With all expenses paid for 4 days, the winners not only had a fine time but also gained a deeper understanding of the larger cooperative advantages of working through soil districts. They wore blue-ribbon "state champion" badges provided by the *Globe-Democrat*. They received special recognition at the convention sessions, were interviewed on the radio, and were given a big play by the press.

In March, the "recognition parties" were held in the five area-winning counties—Worth County in Grant City, Clay County in Liberty, Shelby County in Shelbina, St. Charles County in Weldon Springs, and Dunklin County in Kennett. More than 2,000 cooperators, their families and their friends attended as guests of the *Globe-Democrat*.

Speakers at these parties included James S. Russell, nationally known farm editor of the *Des Moines Register-Tribune*; Lt. Gov. James Blair of Missouri; Robert M. Salter, Chief of the U. S. Soil Conservation Service, and Fred O'Hair, farm conservation director of the National Retail Farm Equipment Dealers Association. Three acts of entertainment were provided for each party, local high school bands furnished musical entertainment, attendance prizes were given, and bronze plaques awarded.

Welcoming the guests at the parties, Clayton paid tribute to the cooperators, their wives and local businessmen, for the impressive record established in 1952 in putting more conservation on the land,

and in telling the story of soil conservation to their neighbors and friends.

Each guest was presented with a copy of the *Globe-Democrat* "Creed of the Soil," suitable for framing.

The awards program for 1953 has now been announced and every district in the state has entered. All district supervisors agree that the competition this year will be even keener than last year, and that the district which goes to the national convention in New Orleans will have to turn in a really outstanding job. The supervisors realize that whether their own districts achieve the top award, or even an area award, everybody wins.

This soil awards program is successful because it is organized and administered locally, with the cooperation of the State Soil Districts Association and the State Soil Districts Commission, and because it enjoys the impetus and publicity provided by a metropolitan newspaper which has demonstrated its sincere interest in the farmer and his problems.

## FISH CULTURE

(Continued from page 277)

and drains off the water and the fish migrate into the hole. The farmer then takes whatever fish he wants from this mud-hole and leaves enough behind so that when the rice field is flooded again the fish escape and start breeding. This type of fish is a fast breeder and a fast grower. It is predominantly vegetarian, thus can live on the minute plant life found in the flooded rice fields. It's good for the rice, too, since it stirs up the mud, and aerates the roots. It also adds fertilizer, and destroys many insects. It has been estimated that fish can increase rice yields as much as 7 percent.

Dr. Lin also felt that the common carp might do well in Haiti's tropical climate, so he is now experimenting with carp. He excavated a farm pond and diverted a small stream to fill it up. The carp, too, is a fairly fast growing fish and should give a considerable yield per acre per year.

Fish are easy to handle and crop. The big advantage to fish culture is that the farmer who wants to use the fish can catch it and use it fresh without having to process and store it. The fish he does not want he just leaves in the pond, alive. There's no storage or transportation problem.

# Iowa Work Books

IT WAS Frank B. Reed's idea to work up a series of questions on conservation which grade school teachers could work into their various science and nature study courses. Reed is farm planner in the Tama County (Iowa) Soil Conservation District.

The questions, with simple explanatory discussions on various phases of conservation, were mimeographed and distributed to the schools. These booklets, with revisions and additions, have become known as "Conservation Work Books." About ten thousand such booklets are being used this year in

Note.—The author is district conservationist, Soil Conservation Service, Marshalltown, Iowa.

six soil conservation districts of east central Iowa.

Last year Reed and I were invited to attend the national convention of the Izaak Walton League in Tulsa, Okla., there to explain the conservation work book program. Since that occasion, inquiries

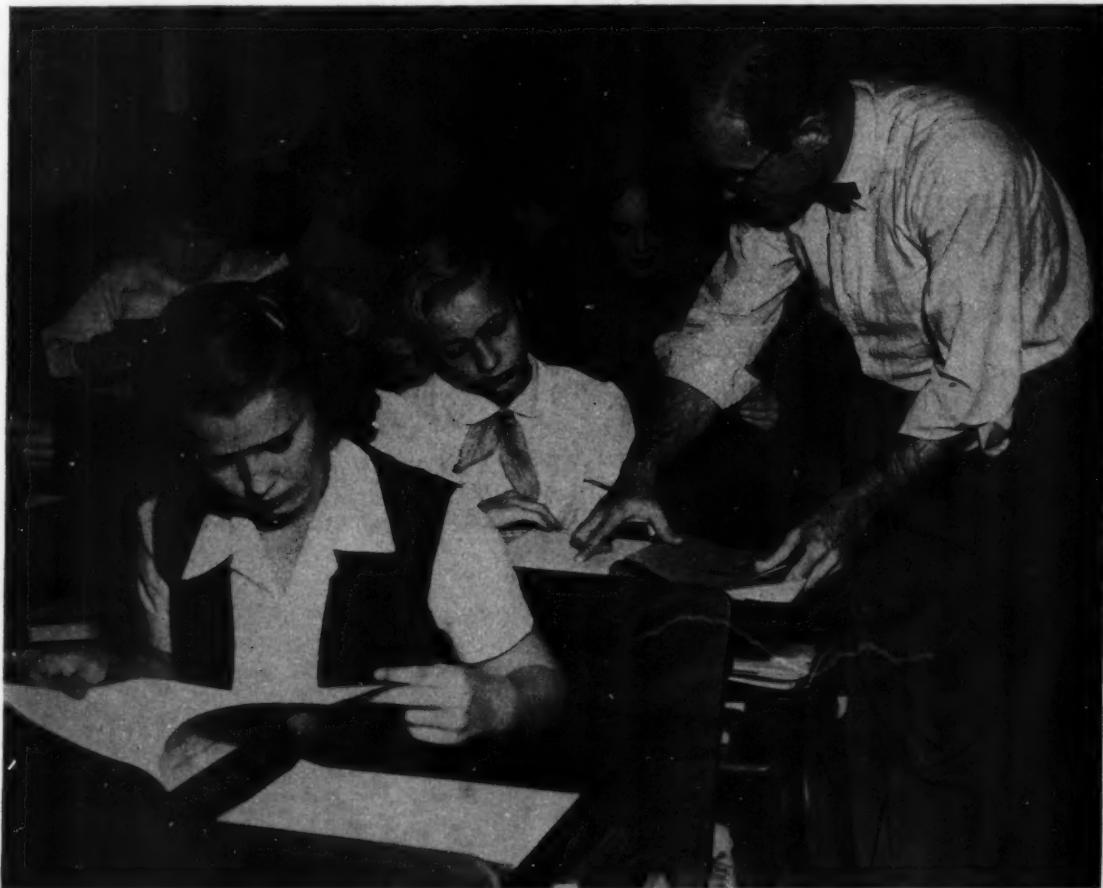
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By H. HOWARD OAK

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about the program have been received from all parts of the United States. It is already in use in several states.

Thus far, conservation work books have been developed for use in the sixth, seventh and eighth



Ray Nyhan, an eighth grade teacher in Marshalltown, explains a point in a conservation work book. One of his pupils last year won the county-wide contest for the best work book. (Photo by Marshalltown Times Republican.)

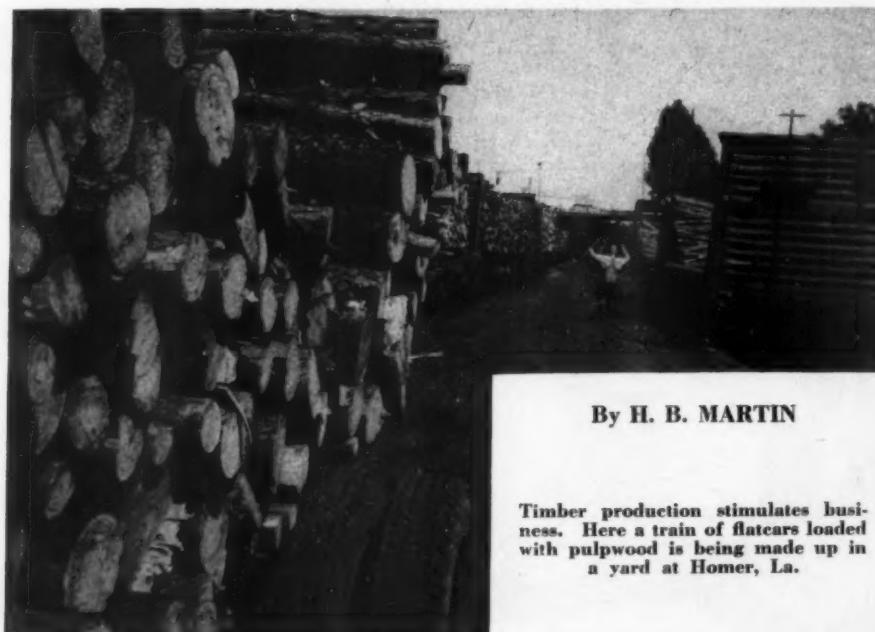
grades. Book No. 1 deals with the conservation of soil and wildlife and the balance of nature. Book No. 2 takes up the conservation of mineral and forest resources, flood control and the conservation of water. Book No. 3 discusses soil fertility, farm conservation planning, and legumes and grasses. All the books have sections intended to familiarize pupils with the names of local, state and national conservation personnel and agencies. The contents are coordinated with a teachers conservation manual issued by the Iowa State Department of Education.

The work book program in Iowa was made possible financially through the interest and generosity

of several agencies. In the Marshall County and Grundy County Soil Conservation Districts, the program is sponsored by the Izaak Walton League and the districts. In the Black Hawk County Soil Conservation District, sponsorship is by a co-ordinated council of five wildlife organizations and the district. In the Tama Soil Conservation District, financial responsibility is assumed by the district alone. These agencies not only have furnished the work books to the schools, but also have provided awards of medals, plaques, and certificates for presentation to outstanding pupils. The cost to sponsors in these four districts this year will run about \$900.

## Louisiana Showcase

*Two land utilization projects teach farmers how to manage their woodlands for continuing income.*



By H. B. MARTIN

**Timber production stimulates business.** Here a train of flatcars loaded with pulpwood is being made up in a yard at Homer, La.

**A** NUMBER of years ago the Government came to the aid of landowners in northwest Louisi-

Note.—The author is state conservationist, Soil Conservation Service, Alexandria, La.

ana by buying 31,157 acres of theretofore unprofitable cultivated and forest land.

Soil depletion and a depressed market had cut farm income to a point where private owners could

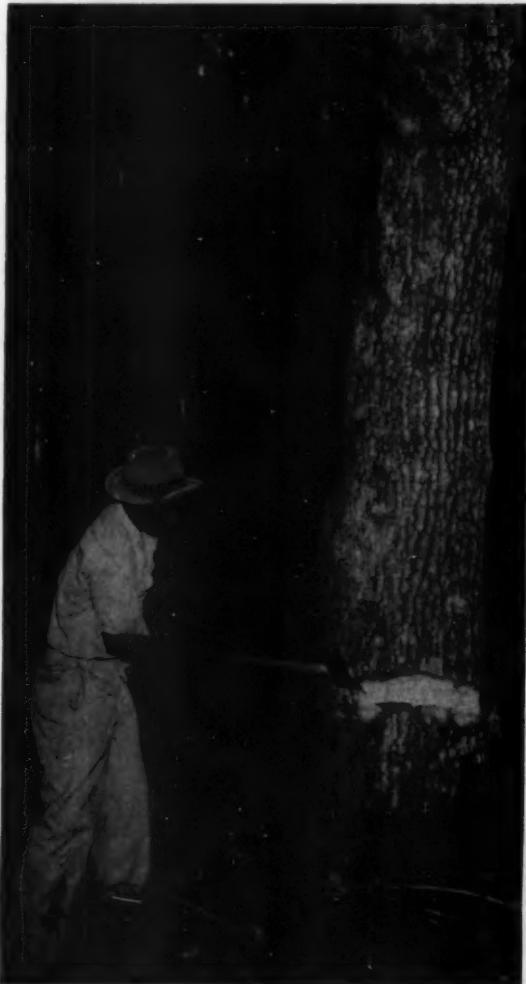
not afford to give such land the treatment needed to protect it and build it back to productiveness.

Many of the woodlands were in young trees or worthless scrubs. They required management of a kind then beyond the ability and means of the owners.

Management of the government-purchased tracts, known as "land utilization projects," was turned over to the Soil Conservation Service. There were 12,624 acres in the project near Minden and 18,533 acres in the project located between Bernice and Homer. The land lies in Webster and Claiborne Parishes.

As custodian of these two projects, the Soil Con-

**Worker girdles oak tree. Contracts specify that over-topping culm hardwoods must either be removed or killed.**



**Industry's feverish activity is marked by smoking chimney's belching steam exhausts and grotesque carriers that whisk loads of lumber hither and yon, as at this sawmill.**

servation Service went to work controlling erosion and reversing the trend toward soil depletion. It developed pastures and improved woodlands through proper management. And in doing its job it also made available areas for recreational centers.

Last year the two projects brought in \$153,678 from forest products, grazing permits and concession fees. Since the Service entered the picture, the income has amounted to \$616,571.

Each of the two parishes receives 25 percent on the basis of the acreage it has in the project. This payment is in lieu of taxes that would be forthcoming if the land were privately owned. The payment for 1952 comes to \$1.03 per acre in Webster Parish and \$1.36 per acre in Claiborne Parish. A recent study showed that comparable nearby land privately owned was paying a tax of 21 cents per acre in Webster Parish and 16 cents in Claiborne.



Once a worn-out cotton field near Minden. Planted to slash pine in 1941 as part of land utilization project, it was thinned for first time last summer. Culls and every other row of trees were taken out, 65 percent of stand being removed. When next cutting is made in 1957, the volume of timber will be a third greater than in this first thinning.



SCS technicians mark and scale merchantable pine trees near Claiborne Parish.

The rest of the project revenue goes to the United States treasury. The Soil Conservation Service has a fixed budget that sets aside a specific amount for operation, maintenance and improvement of the projects, and none of the income is applied to these purposes.

Of last year's total returns, forest products accounted for \$146,716. Since 1944, income from the woodlands in the two projects has totaled \$571,607. The general trend has been upward since 1943, when the revenue from the woodlands was but \$3,299. Production will continue to increase for many years under a system of sustained-yield cutting, removal of culs and worthless hardwoods, encouragement of new pine growth, and protection against fire and grazing.

The woodlands have done more than produce the bulk of the income from the two projects. They have constituted an effective showcase for farmers throughout northwest Louisiana.

Farmers learn how to manage their own woodlands by observing operations in the projects. On the Minden project local farmers themselves cut trees under permit. The management practices followed here are the same as those recommended for use on farms.

On the Homer project the timber is sold on contract, going usually to sawmill operators. The woodlands are divided into compartments which are subdivided into 40-acre tracts which are cut every 5 years.

An SCS crew of four men <sup>\*</sup>paves the way for the letting of cutting contracts. Three men mark the trees to be cut, measure their diameter, and estimate their length. The fourth man jots down the figures from which he later calculates the volume of timber ready for harvest. Sealed bids are invited on this volume of timber, and the contract goes to the highest bidder.

A lumber company of Bernice has been one of the successful bidders. One of its officials says: "The Homer project is a big help. If we are successful bidders, we figure that it will supply from a third to a half of our production. We run about 7 million board feet a year. We've used about that much from the project the past 3 years. We employ about 160 people the year around. They all live in Bernice, or within a 12-mile radius. Our annual payroll runs to \$350,000. So you can see what the woodlands project means to our community.

"The project has also helped many of our farmers. They have learned from the project how to manage their own woodlands to get the most out of them. Our average farm woodland produces about 200 board feet per acre per year, but it ought to be growing 500 board feet. A lot of our farmers have brought up their production by seeing how its done on the project."

On the Minden project in Webster Parish cutting permits are issued to about 70 owners or operators of small farms of the area. As in the Homer project, the trees ready for cutting are marked by SCS technicians and the woodlands are divided into 40-acre plots that are harvested in turn once every 5 years. Farmers are limited to one permit a year, so that as many as possible may benefit. They take out posts, poles, pulpwood, and sawlogs. As the holder of a permit usually hires several helpers, this system also serves to spread employment. Webster Grigsby, one of the farmers holding permits, says: "This plan helps me get my groceries and pay my small debts. In 1951 and again last year I was able to raise my crops of cotton, corn, sweet potatoes and peas without borrowing money except for fertilizer, which I bought on credit."

Grigsby got out posts and pulpwood. Six men worked for him. He netted about \$600 in the 2 months it took him to get out the quantity of posts and pulpwood specified.

#### **GOVERNOR CITES VALUE OF CONSERVATION.—**

Governor John S. Battle of Virginia, in a radio talk presented during Virginia's Conservation of Natural Resources Week, said in part: "Our natural resources are the very foundation of our great industrial and agricultural strength. Productive land on which good crops, pastures, or forests will grow and which will sustain wildlife is the most valuable resource on earth. The misuse and improper treatment of our land through the years has caused accelerated soil erosion, ruinous floods, sedimentation of our reservoirs and harbors, and many other forms of severe damage."

**POND CUTS COSTS.—**When O. C. Doe and Sons, Harvard, Mass., fruit growers, built a farm pond 100 feet by 120 feet for fire protection and spray water, they cut their annual spraying cost \$600. Previously they had hauled water 40 miles every time they sprayed—15 times a year in 1952. There was a saving of 60 gallons of gas, and the wear and tear on the water truck. They got better results from spraying because the material could be applied promptly at a time that would increase effectiveness in controlling insects and disease—all of which brought more and better fruit. The improved fire protection also resulted in a 25 percent cut in the insurance premium.



*In many parts of the country, streambank erosion control has saved vast acreages of farm land from destruction. This excellent photograph by Hermann Postlethwaite shows post-retard jetties which were installed on a section along Magic Creek on the farm of Si Howard, in the Big Sand Soil Conservation District, Miss., in August 1950. Willow and other vegetative plantings are commonly used in connection with such mechanical contrivances, for permanent bank stabilization.*

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**SOIL CONSERVATION**

## Index



UNITED STATES

GOVERNMENT PRINTING OFFICE

WASHINGTON : 1851

For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Price 10 cents

## SOIL CONSERVATION

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VOLUME XIII

Aug 1991 Vol 12 No 8

UNITED STATES DEPARTMENT OF AGRICULTURE  
SOIL AND CONSERVATION SERVICE

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